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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/054,692	12/19/2001	Trung T. Doan	500300.02	8574

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EXAMINER

HONG, WILLIAM

ART UNIT PAPER NUMBER

3725

DATE MAILED: 11/12/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/054,692

Applicant(s)

DOAN ET AL.

Examiner

William Hong

Art Unit

3725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 December 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-53 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-53 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.                      6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Reissue Applications*

The original patent contained a Certificate of Correction therein. Certificate of Correction changes must be entered in the reissue application without bracketing or underlining.

#### *MPEP 1411.01*

A reissue shall not be granted to recapture claimed subject matter that was surrendered in an application to obtain a patent. *MPEP 1412.02* The limitation “wherein the body is movably attached to the wafer carrier” omitted in the newly added reissue claims was present in the claims of the original application. The examiner’s reasons for allowance in the original application stated that it was this limitation that distinguished over a potential combination of references. *Original Application, Paper No. 6, page 3* Applicant did not present on the record a counter statement or comment as to the examiner’s reason’s for allowance, and permitted the claims to issue. The omitted limitation is thus established as relating to subject matter previously surrendered.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1, 3-6, 8-9, 12-13, 15-18, 20-21, 24-31, 33-36, 38-39, 42-45, and 47-53 are rejected under 35 U.S.C. 102(e) as being anticipated by Cheng et al (USP 6,019,670). Cheng discloses a polishing machine (30) having a pad refurbisher (200) for CMP of a semiconductor and a method of refurbishing comprising: a platen (40) having a polishing pad (42) with a polishing surface (44) thereon; a wafer carrier (100) and a pad refurbisher (200) having a body adapted for attachment (202) to the wafer carrier and a refurbishing element (204); the pad refurbisher is slidably attached to the wafer carrier (col. 9 lines 20-26); a linear actuator attached to the body wherein the actuator independently moves the body with respect to the wafer carrier (col. 9 line 5 through col. 10 line 12); the distal face of the body defining a ring positioned radially outwardly from the perimeter of the wafer carrier and is symmetrically positioned about the center of the wafer carrier (fig. 4); the body has a plurality of arcuate segments positioned radially outwardly from the perimeter of the wafer carrier (fig. 8); and the refurbishing element is a pad conditioner having a plurality of embedded diamonds (col. 8 line 59 through col. 9 line 8, and col. 9 lines 45-50).

*Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 7, 10-11, 14, 19, 22-23, 32, 37, 40-41, and 46 are rejected under 35 U.S.C.

103(a) as being unpatentable over Cheng et al in view of Tanaka et al (USP 5,902,173). Cheng has been described above. Cheng does not disclose: the body is fixed to the wafer carrier; and the body has a first refurbishing ring that is a pad cleaner being positioned radially outwardly from the perimeter of the wafer carrier and a second refurbishing ring that is a pad conditioner being positioned radially outwardly from the first refurbishing ring. Tanaka discloses the refurbishing body is fixed to the wafer carrier (fig. 22). It would have been obvious to one of ordinary skill in the art at the time the invention was made to fixedly attach the refurbishing body to the wafer carrier of Cheng as disclosed by Tanaka to simplify the apparatus (col. 7 lines 20-25). Further, Tanaka discloses the body has a first refurbishing ring that is a pad cleaner that is a brush (47) being positioned radially outwardly from the perimeter of the wafer carrier and a second refurbishing ring that is a pad conditioner (46) being positioned radially outwardly from the first refurbishing ring (fig. 22 & 23). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the refurbishing body of Cheng with a first and second refurbishing ring in view of Tanaka to lap the polishing pad and then move away the scrapped off particles (col. 7 lines 11-14).

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*Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art listed on the attached PTO 896 are cited to show relevant CMP apparatus having refurbishing tools.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William Hong whose telephone number is 703-308-9619. The examiner can normally be reached on Mon-Thu, 8:00a-6:30p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Allen Ostrager can be reached on 703-308-3136. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3579 for regular communications and 703-305-3579 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1078.



William Hong  
Examiner  
Art Unit 3725

November 5, 2002